

REMARKS/ARGUMENTS

Favorable reconsideration of this application as currently amended and in view of the following remarks is respectfully requested.

Claims 1-11 are currently active in this case. Claims 1-10 have been amended, and Claim 11 has been added by the current amendment. No new matter has been added.

Regarding the change to Claim 1, see, for example, page 14, line 15 to page 15, line 5 of the specification. Regarding the changes to Claim 3, see, for example, page 23, lines 6-27 of the specification. Regarding newly added Claim 11, see the same passage identified regarding independent Claim 1.

In the outstanding Office Action, Claims 1 and 2 were rejected under 35 USC 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0178144 to Ohmi et al.; Claims 3 and 4 were rejected under 35 USC 103(a) as being unpatentable over Ohmi et al. in view of U.S. Patent Publication No. 2005/0001156 to Hoffman et al.; Claims 5 and 6 were rejected under 35 USC 103(a) as being unpatentable over Ohmi et al. in view of Hoffman et al. and U.S. Patent No. 6,736,930 to Hongoh; and Claims 7 and 8 were rejected under 35 USC 103(a) as being unpatentable over Ohmi et al. in view of Hoffman et al. and U.S. Patent No. 5,660,047 to Paganessi. Claims 9 and 10 were deemed not to add patentable weight.

Applicants respectfully traverse.

Briefly recapitulating, the present invention (Claim 1 as amended) is directed to a plasma processor including, among other things, a cooling medium channel through which a cooling medium cooling the process gas supply parts flows; and a cooling medium mixer configured to mix a cooling gas and mist into the cooling medium and supply the cooling medium to the cooling medium channel of a process gas supply part.

In contrast to the claimed invention, Ohmi discloses a coolant block 19 formed with a coolant water passage 19a on an the antenna body 17. The coolant block 19 is cooled by

coolant water in the coolant water passage 19a. However, Ohmi fails to teach or suggest a cooling medium mixer configured to mix a cooling gas and mist into the cooling medium and supply the cooling medium to the cooling medium channel of the process gas supply part.

Thus, Ohmi et al. are not believed to anticipate or render obvious the subject matter defined by Claim 1. Dependent Claims 2 and 11 are believed to be allowable for at least the same reason that Claim 1 is believed to be allowable. In particular, Claim 11 further specifies that the cooling medium mixer comprises a mixing part and a mist source, the mist source configured to generate mist by atomizing supplied H₂O.

Claim 3 is also directed to a plasma processor and defines, among other things, a cooling medium circulator connected to the cooling medium channel and configured to circulate the cooling medium. The cooling medium circulator including a compressor configured to compress the cooling medium and a reserve tank that retains the compressed cooling medium.

The Official Action acknowledges that Ohmi et al. do not “teach a cooling medium circulator for circulating the cooling medium.” Applicants agree. However, Hoffman also fails to teach or suggest, among other things, that the heat exchanger 1524 includes “a compressor configured to compress the cooling medium” or “a reserve tank for retaining the compressed cooling medium” as required by Claim 3 as amended.

Further, because of the configuration defined by Claim 3, the flow rate or pressure of the cooling medium to be introduced into the process gas supply part is stabilized. This benefit is further evidence of the non-obviousness of independent Claim 3 over the combination of Ohmi et al. and Hoffman et al.

In view of the foregoing, Ohmi et al. are not believed to anticipate or render obvious the subject matter defined by Claim 3 when considered alone or in combination with

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Hoffman et al. Dependent Claims 4-10 are believed to be allowable for at least the same reasons that Independent Claim 3 is believed to be allowable.

In view of the foregoing, no further issues are believed to remain. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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